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ADP F.10

20 March 1969

MEMORANDUM FOR THE RECORD

SUBJECT: Meeting of the Automap Data Bank Study
Group, 19 March 1969

1. The full committee met on 19 March and continued the discussion on retrieval strategy. It was reported that the CD/BGI Staff had taken up the subject of country coding on the previous day and decided that only boundaries, cities, and transportation (option) required country identification. Hereafter, all other features need not be segmented at an international boundary. [redacted] amplified his 25X1A9a previous atlas grid proposal and added a look-up index feature that would automatically determine in which squares the map frame fell. He raised the question on the speed of a disk search by CAM and 25X1A9a [redacted] agreed to request an area of ocean to determine the elapsed time with no computation.

2. A proposal was made by the undersigned. It began by listing the following four requirements that any retrieval scheme must meet:

a. It must operate with a very large file. Data Bank II will have an estimated 2,000,000 points for rivers, coastlines, and boundaries. The addition of transportation, internal boundaries, and cities will probably double the size.

b. It should be expansible to include Data Bank III.

c. Access must be expeditious but need not necessarily be random or real time.

d. Any plan should be compatible with the authorized CRT experiment. The CRT configuration includes a 2250 CRT controlled by a 1130 computer on-line to the time-sharing 360/67 computer with a dedicated disk drive in a 2314 disk facility.

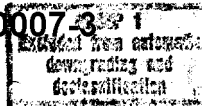
A large computer is needed to process our data and our system must be on-line to utilize the CRT. However, it is most likely that a single disk drive will not accommodate Data Bank II and in no case Data Bank III. Therefore, the proposal was made to:

- Place Data Bank II on magnetic tapes in an overlapping manner.

- Search these tapes on the 1130, process the selected

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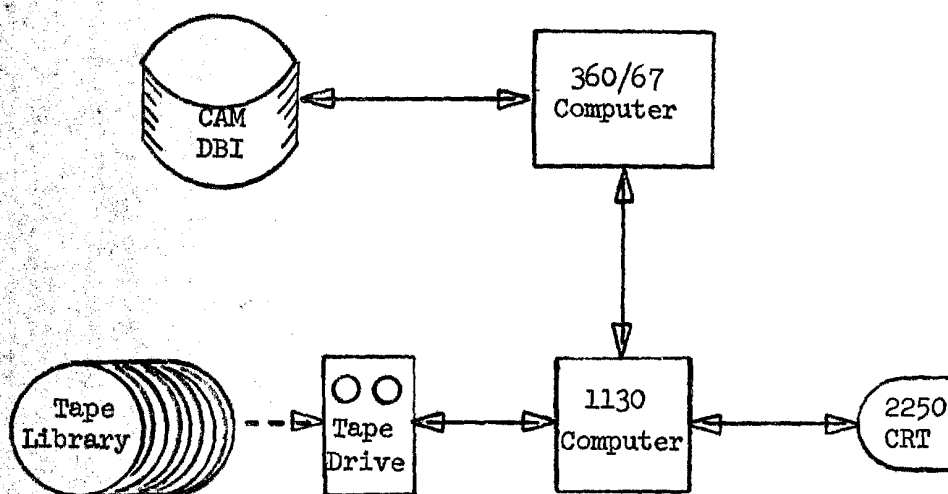
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line segments on the 360/67, and return the data for display and plot.

In detail, each tape would contain area coverage sufficient to draw any map at scales between 1:10,000,000 and 1:500,000 without going to another file. This would be accomplished by sufficiently overlapping adjacent coverage. A six tape scheme was presented but it could be two or two hundred tapes as long as they overlapped. The eventual need for a tape drive to receive plot data on-line is the keystone of the proposal. Any tape from a readily expandible library of tapes could be mounted and searched by the 1130 for line segments within a given map frame. These segments and the plot instructions would be sent on-line to the 360/67, converted to plot data, and returned to the CRT for display. If satisfactory, the final plot could be relayed to the tape drive and recorded. A diagram of the proposed system was presented.



PROPOSED CONFIGURATION

The system would possess the following advantages:

- It would meet all of the requirements stated above.
- Only one file needs to be accessed for any one map.
- It would only utilize the larger computer for those jobs it does best.

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- It does not require multiple on-line storage devices.

The disadvantages are that it would be slower and require more steps than a large on-line storage system.

4. The next meeting will be on Wednesday, 26 March, 0900-1100, in Room 4F21. The above plan and alternatives will be discussed. It is hoped that the participants will advance additional proposals at that time.

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